erythroderma made at infancy was no longer tenable as he grew older. The facial erythroderma, follicular prominence of the rash and palmoplantar thickening might have suggested atypical juvenile pityriasis rubra pilaris but the naevoid pattern was not described by Griffiths (1976). The linear warty streaks on the limbs, nail dystrophy and lichenoid appearance of the rash suggested Nekam's (1938) disease. However, the early onset and asymptomatic nature of the rash made Nekam's disease very unlikely.

The swirling pattern on the trunk and linear streaks on the limbs suggested a form of epidermal naevus. The persistence of the rash despite various forms of treatment is in favour of a naevoid condition. The histology supported the diagnosis of the inflammatory type of epidermal naevus (Lever & Schaumber-Lever 1975).

This case exhibits several unusual features. Inflammatory epidermal naevus usually produces pruritic symptoms (Altmann & Mehregan 1971, Kaidbey & Kurban 1971) which were absent in our case. Most of the cases of inflammatory linear epidermal naevus reviewed by Altmann & Mehregan (1971) were female and the lesions affected the lower part of the body. Our male patient has extensive involvement, leaving very little uninvolved skin. Such a widespread distribution of inflammatory epidermal naevus does not appear to have been reported previously.

Solomon *et al.* (1968), in reviewing many clinical variants of epidermal naevi, found that the majority of cases had associated neurological or skeletal abnormalities and suggested that extensive epidermal naevi form part of the epidermal naevus syndrome. Our patient does not fulfil the criteria for the syndrome. Furthermore, the histology of our patient did not show epidermolytic hyperkeratoses which have been reported in the majority of biopsies of the epidermal naevus syndrome.

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Pathological fracture in acute osteomyelitis in an adult[1]

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Acute osteomyelitis presenting in the shaft of a long bone is rare in adults. Such a case is reported with a complicating pathological facture, and its slightly unorthodox method of treatment is described.

Case report

One month prior to admission, a 40-year-old lithographer developed a painful right shoulder and upper arm. Initially troublesome at night, this became increasingly severe and, despite physiotherapy and a short course of ultrasonics, movement became intolerable. There was no history of trauma. Twenty-three years previously he had developed acute osteomyelitis of the lower end of his left femur which had settled down over three months, without any abscess formation nor sequestration, on treatment with high-dose penicillin. He had never had any subsequent trouble.

On admission, he was obviously unwell and pale, but was not clinically anaemic or pyrexial. He had a mild tachycardia. Examination of the right upper arm revealed an exquisitely tender, hot swelling over the mid-shaft of the humerus. He had good power and movement in the hand with no obvious neurological deficit. There was no cervical lymphadenopathy.

Initial investigations revealed: haemoglobin 11.9 g/dl; total white count 14.2×10^9/l; differential: polymorphs 10.0×10^9/l, lymphocytes 4.2×10^9/l; ESR 100 mm/h. X-ray showed an extensive osteolytic lesion of the mid-shaft of the right humerus (Figure 1A).

Malignant neoplasm was provisionally diagnosed and arrangements were made for trephine biopsy the following day. Overnight the pain in his arm became excruciating despite large doses of diamorphine. By morning his right upper arm was deformed and he was unable to use it, indicating a spontaneous fracture.

At operation, pus was seen to exude down the track made by the trephine. Immediate bacteriological investigation demonstrated large numbers of gram-positive cocci. These proved to be a penicillin-sensitive strain of *Staphylococcus aureus*. Histological examination of the debris at the fracture site confirmed acute abscess formation in the absence of bony malignancy. An intramedullary Kuntscher nail was inserted from

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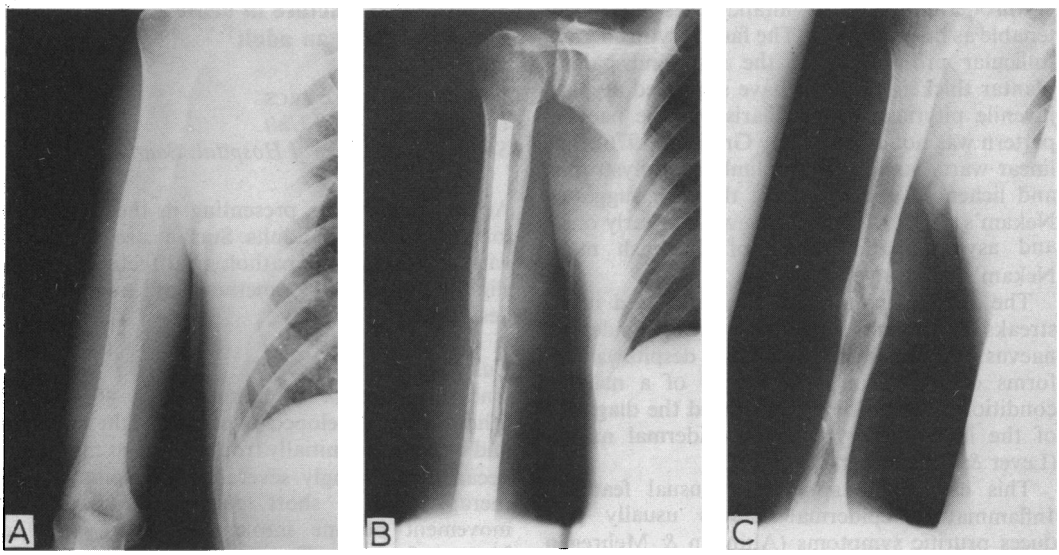

Figure 1. X-rays of the right humerus. A: on admission, showing an extensive osteolytic lesion of the mid-shaft. B: immediately postoperatively, showing the Kuntscher nail *in situ*; the edges of the fracture can also be seen. C: at 4 months, immediately after removal of the nail, showing that bony union has occurred

the elbow (Figure 1B). Redivac suction drains were placed at the site of the lesion and along the distal shaft of the nail for wound irrigation. A course of intramuscular penicillin and Fucidin was immediately commenced, the doses being 1 megaunit and 500 mg respectively, four times daily. Simultaneously, 1 megaunit of penicillin diluted in 20 ml normal saline was instilled through the drain twice daily for one week.

His postoperative recovery was remarkably rapid and he was discharged home after 14 days. Penicillin and Fucidin were continued orally, at a reduced dosage, for a further 2 months. At 4 months, X-ray showed complete union and the K nail was removed (Figure 1C). Eighteen months later he remains entirely asymptomatic.

Discussion

Pathological fracture is an uncommon but well recognized complication of chronic osteomyelitis. It has been described in children (Kovalevich 1966, Wilkinson 1979) and in adults, where fractures of the mandible have been recorded (Azumi *et al.* 1980, Kelly & Harrigan 1977). In adults in the acute stage of the disease, however, pathological fracture appears only to have been described in the presence of overwhelming septicaemia from an obvious predisposing cause (Lorenzi *et al.* 1968).

In the present case it is assumed that the causative organisms arose from the original site of his osteomyelitis, despite the absence of clinical signs, symptoms and X-ray changes. There were no other infective foci. Anti-staphylolysin and antinuclease titres were normal. It is possible that the infection was exacerbated by the use of ultrasonic therapy, which is not recommended where there is established infection; however, it is unlikely that sufficient damage was caused so as to render a fracture inevitable.

The use of internal fixation in the presence of infection is open to question but has been used successfully in the past (Kostuik & Harrington 1975). It was felt that this was the only practicable method of achieving immobilization and therefore pain relief in our patient. It also provided a channel for wound irrigation. In spite of mild inflammation of the wound site at 2 months, which settled spontaneously after 2 days, bony union was not significantly delayed. This good result would tend to justify the management in this unusual case.

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